



**For the Environment Committee  
Testimony of Alicea Charamut, Executive Director  
March 10, 2023**

*Rivers Alliance was formed to fight for sound water policies at the state and federal levels, to provide education on water resources, and to advocate for any person or group striving to protect water. If you want clean, free-flowing and healthy rivers, and high-quality drinking water, Rivers Alliance is here to help.*

**HB 6809 AAC FINANCIAL INCENTIVES FOR CERTAIN STREAMSIDE BUFFERS -  
Support**

Thank you for the opportunity to provide testimony in support of this bill, to provide information about the importance of riparian buffers, and to offer examples of opportunities that the funding in this bill can provide if passed. We envision a voluntary incentive program built on the best of what other states are already doing through partnerships with DEEP and other conservation groups that take advantage of funding to address pollution from stormwater in the Governor's budget.

**The importance of riparian buffers**

Climate change and increasing development pressures are threatening our water resources statewide. If left unchecked, we will see an increase in impacts to personal property and a decrease in the safety and economic health of our communities due to water quality degradation, flooding, and drought. With rising temperatures, our streams are experiencing an **increase in harmful algal blooms including in drinking water supply watersheds.**

Riparian buffers protect and improve water quality, attenuate flooding, and provide a myriad of additional ecosystem services. **Riparian buffers are one of the most cost-effective and efficient nature-based solutions to reducing nutrient loads.** Through land-use changes and development in the absence of specific protections for riparian buffers in our regulatory framework, we are losing this important "natural infrastructure."

**Hands down – the most bang for your buck**

Riparian buffers were identified as the most cost-effective solution to Bantam Lake's water quality issues. Bantam Lake is Connecticut's largest natural lake and provides swimming, fishing, and boating opportunities for the general public. Unfortunately, Bantam Lake has experienced persistent

harmful algal blooms (HABs.) HABs are naturally occurring cyanobacteria that get out of control when fed by an excess of nutrients in the water. HABs can release toxins that can be a serious public health concern. The presence of HABs makes any direct-contact activity unsafe and will reduce property values. Who wants to live on a lake in which you can't swim or boat safely?

Part of the process in addressing this issue was to establish a Watershed Based Plan (WBP) which was approved in 2021. In order to fully address the nutrient loading that is the root cause of HABs, it is necessary to evaluate all of the potential causes then consider the solutions along-side their costs which is a primary goal of a WBP. Below is a chart from the Bantam WBP that summarizes the cost per pound of Phosphorus reduced for each Best Management Practice (aka solution) category. Structural BMPs are engineered green infrastructure solutions and Riparian Buffer Improvement is listed under "other." **Riparian buffer improvement is the clear winner when it comes to "bang for your buck" in reducing a key nutrient that causes HABs at approximately \$6,000/pound of phosphorus as opposed to engineered solutions that cost between \$30,000 and \$100,000+/pound of phosphorus.**

### Bantam Lake WBP Pollutant Load Reduction Optimization Analysis for the Bantam Lake Watershed

**Table 13a. Scenario 1 Results**  
(Maximum Possible Implementation Extent, No Optimization)

BMP Category	BMP Name	Treated Area (ac)	TP Load Reduction (lb/yr)	TN Load Reduction (lb/yr)	Cost (\$)	Cost per Pound P Reduced (\$ / lb)
<b>Structural</b>	Bioretention Area (HSG A/B)	71.3	61.7	284.0	\$ 8,005,079	\$ 129,700
	Sand Filter (HSG A/B)	71.3	88.5	284.0	\$ 9,289,206	\$ 29,204
	Bioretention w/ ISR (HSG C/D)	116.7	137.9	1,057.4	\$ 13,229,308	\$ 104,951
	Gravel Wetland (HSG C/D)	233.5	221.4	1,748.2	\$ 14,881,912	\$ 95,934
	Wet Pond (HSG C/D)	116.7	96.2	451.2	\$ 5,762,927	\$ 67,226
	Infiltration Basin (HSG A/B)	142.6	221.3	1,757.1	\$ 6,462,056	\$ 59,924
<b>Institutional (aka Non-structural)</b>	Street Sweeping	267.0	11.8	84.7	\$ 331,000	\$ 28,051
	Catch Basin Cleaning	250.0	9.8	70.5	\$ 100,000	\$ 10,204
<b>Agricultural / Other</b>	Riparian Buffer Improvement	343.7	35.9	626.9	\$ 216,000	\$ 6,017
	Livestock Exclusion Fencing	10.6	3.8	51.7	\$ 31,000	\$ 8,158
<b>Totals:</b>		<b>1,623.5</b>	<b>888.2</b>	<b>6,415.6</b>	<b>\$ 58,308,488</b>	<b>\$ 65,645</b>

**Note:**  
1. Treated runoff depth is 1" for all structural BMPs.  
2. Street Sweeping and Catch Basin Cleaning results are annual.  
3. TP reduction goal is 107 lb/yr.  
4. Color scale for "Cost per pound of P Reduced" ranges from lowest (green) to highest (red).

### Investing in riparian buffers protects investments in infrastructure

Investment in green infrastructure for stormwater management with a focus solely on engineered solutions without protecting and enhancing nature-based solutions, such as riparian buffers, will eventually undercut any water quality improvements gained through very expensive engineered

solutions. To be clear, engineered solutions are an essential tool in solving water quality issues. However, because pollution rolls downhill and downstream, by investing in simple, effective, natural tools upstream – such as riparian buffers – we are **protecting investment in structural solutions by curbing upstream pollution.**

## **Program possibilities**

There are many good examples of riparian buffer incentives from other states. A summary of these programs is provided at the end of this testimony. These programs are voluntary and landowners apply to participate in the program.

There are many strong, active conservation partners that could take part in an incentive program to ensure its success and minimize DEEP's administrative role in a program. Partnerships with conservation groups has long been the best way maximize environmental protection when DEEP's resources are spread thin. The following are just two examples of how partners can be an integral part of a successful buffer incentive program:

**Connecticut Conservation Districts:** Similar to the Pennsylvania model, local CCD's could provide technical support to landowners and provide a maintenance plan. This would require that funding is provided to the CCDs for this service.

**Land Trusts:** Willing land trusts could hold conservation easements. This would also require that funding is provided for enforcement and administration of the easement.

There are also many opportunities for **targeted pilot programs** in waterbodies that are impaired for nutrients or waterbodies that have an active plan in which incentives for riparian buffers would implement solutions already identified. A good example of such a program is the Pawcatuck Watershed Nutrient Project. Funds could be used in the Connecticut portion of that watershed to re-establish or maintain riparian buffers.

## **This is a good start**

Including investments in one of nature's most effective and cost efficient BMP for water quality in funding for stormwater management programs is critical this year considering the amount of funding that being put toward combating climate change.

However, it is extremely important to note that **riparian buffers will continue to disappear from our water quality toolbox as long as Connecticut's regulatory framework provides no specific protections for riparian buffers along wetlands and watercourses. Connecticut has the least protective buffer standards of all the New England states and if DEEP, this legislative body, and stakeholder groups do not come together to find a solution to change this soon, the state and our communities will be spending double or triple to combat water quality issues and flooding – all as we watched as the most expensive, least effective solution disappear.**

Thank you, again, for raising this bill and giving myself and many others an opportunity to weigh in on why it is important to invest in riparian buffers and provide input into how such a program could be structured. Rivers Alliance would enthusiastically participate in any further discussions on riparian buffer incentives.

# Summary of Riparian Buffer Incentive Programs in Other States

## Arkansas

**The Stream Team Mini Grant Program** The program provides cost-share assistance to landowners for the restoration of riparian zones. Direct Financial Payments

**The Arkansas Private Wetland Riparian Zone Creation and Restoration Incentive Act** The act was established in 1995, and allows a credit against the tax for any taxpayer engaged in the development or restoration of wetlands and riparian zones. ARK. CODE ANN § 26-51-1501. The purpose is to encourage private landowners to restore and enhance existing wetlands and riparian zones, and create new wetlands. The program is administered by the Arkansas Soil and Water Conservation Commission and Private Lands Restoration Committee. In order to qualify, the landowner must agree to maintain the practice for ten years. The amount of credit for a taxable year must not exceed \$5,000/taxpayer. Any unused portion of the credit may be carried over for nine years after the credit originated for a total tax credit of \$50,000/project. Costs eligible for credit are professional services required for project development and maintenance and establishment of permanent vegetative cover, construction of enclosures, bank stabilization and construction of berms and water control structures. Under the program, 1,331.99 acres have been preserved/created/restored. Thirty-four applicants have been approved for tax credits since the program's inception. The funding for the program was established by the State of Arkansas at \$500,000, and approved by the Arkansas Legislature. From that time until now, approximately \$280,000 has been used, leaving approximately \$220,000. Once the funding for the program is completely allocated, more funding will be sought. Tax Relief

## California

**The Riparian Habitat Conservation Program** The program provides in kind materials and habitat improvement assistance. The goal of the program is to protect, restore, enhance and preserve riparian habitat throughout California. The program operates on private lands, although private landowner are not eligible for funds directly from the state. Instead, state, local and federal agencies, and non-profit organizations receive funding from the Wildlife Conservation Board. Private landowners then partner with an eligible entity to restore riparian areas on their properties. Landowners are required to monitor and manage project improvements for 25 years under a required management plan. The program has been in existence since 1992. Over 2000 acres are covered by the program overall and the program has had 32 participants overall, with two in the last year. The funding for the program varies, although normally approximately \$2 million is available each year. Direct Financial Payments

**Incentives for Steelhead, Salmon, and Anadromous Trout Conservation** The Department of Fish and Game provides technical training to private landowners to restore steelhead and salmon habitat; funding for acquisition of conservation easements; education projects, and grants. This program is statutorily authorized. CAL. FISH & GAME CODE § 6217.1. Landowners with coastal waters used by salmon and anadromous trout species or riparian buffer strips along coastal rivers

and streams may qualify for the program. Funding is provided through the Salmon and Steelhead Trout Restoration Account in the Resources Trust Fund. Direct Financial Payments, Property Rights Tools, Education/Technical Assistance

## **Kansas**

**The Governor's Water Quality Buffer Initiative** The program provides funds to supplement federal CRP rental payments by offering cost share assistance for the protection of riparian buffers and grass filter strips. It has been available for two years on agricultural lands through the Kansas Conservation Commission. The program is intended to increase habitat for game and nongame pheasant, quail, deer, etc. The contract period maximum is 15 years. Landowners receive property tax reduction for riparian areas enrolled in CRP. There are a total of 3,100 acres enrolled - a total of 6,500 acres will be enrolled in FY 2002. Currently there are 450 contracts with landowners. Cost share is available at a 50% rate as a supplement for riparian forest buffers, 30% supplement for grass filter strips. The maximum state/federal payment is \$150/acre. The program is funded by the Special Revenue Fund of the Kansas Water Plan; in FY 2002, \$265,134 was available. Direct Financial Payments, Property Rights Tools

**Conservation Districts Law** The law offers cost-share for the preservation of riparian buffers. Financial assistance is provided to landowners as authorized by statute to implement practices such as revegetated riparian areas, tree plantings, wetlands enhancement and innovative streambank stabilization and soil bioengineering practices. KAN. STAT. ANN. § 2-1915. The law is administered by local conservation districts. Grants may be made out of funds in the treasury of the state.

## **Oregon**

The Riparian Lands Tax Incentive Program (RLTIP) offers a property tax incentive to property owners for improving or maintaining qualifying riparian lands which can include up to 100 feet from a waterway. Under this program, property owners file a Riparian Management Plan with the Oregon Department of Fish and Wildlife and County to receive a complete property tax exemption for the qualifying riparian lands on their property, provided measures are implemented to protect, conserve, and restore the riparian land.

## **Pennsylvania**

**Incentives to Manage Vegetative Riparian Buffers** The Department of Environmental Protection's Bureau of Land and Water Conservation, through local conservation districts, has offered cost share and in-kind assistance in the form of stream bank fencing materials in order to improve vegetative buffers along streams. The program has been available since 1985. Landowners in all or parts of the 41 Pennsylvania counties within the Potomac and Susquehanna river basins are eligible. The number of miles of stream protected under the program are: 13.8 last year (7/1/00-6/30/01), 84.8 cumulative since 1994; acres of riparian habitat protected: 169.3 last year, 867.82 overall; number of cattle managed: 2,824 last year, 13,276 overall; number of farms participating: 46 last year, 212 overall. Funding for the program was approved at \$367,754 in 1995. Direct Financial Payments

## South Dakota

**Riparian Buffer Strip Program** Eligible riparian buffer strips can receive a reduction in the assessed value for property tax purposes. Only land within 120 feet of a listed lake, river or stream may be classified as a riparian buffer strip and grazing is prohibited from May 1 through Sept. 30. Landowners approved for the riparian buffer strip program may receive an increased reduction in property value. In addition, there is no longer an annual application. Once approved, the new assessed value of the eligible property will be approved for 10 years or until the property changes use. Lastly, land impacted by center pivot irrigation can now be harvested or mowed starting June 25.

## Washington

**The Riparian Open Space Program** The Department of Natural Resources provides for the purchase of land or rights to land for ecological protection and fisheries enhancement under the program. It focuses on unconfined avulsing channel migration zones within forest lands. To qualify, landowners must apply and state whether they will donate land, or seek statutory compensation for conveyance. The department pays for timber value in addition to land value if purchasing fee title. Easements must include qualifying timber within riparian areas. Once conveyed, the land goes under a Special Wildlife Management Plan and must use best science, landscape approaches, protect threatened and endangered species and comply with federal and state environmental laws and habitat conservation plans and incidental take permits. The program has been available since July, 2001. The legislature funds the program at \$1million per year. Direct Financial Payments, Property Rights Tools

**The Upland Wildlife Restoration Program** The Department of Fish and Wildlife offers in kind assistance in the form of staff labor, equipment, and plant materials for habitat improvements under the program. In addition, landowners receive technical assistance, recognition, signage of properties and a liability exemption for allowing public access. Owners may receive \$100/acre in direct payments to protect agricultural lands adjacent to riparian areas (specific to SE Washington). This program is available on private agricultural and forested lands and benefits all forms of upland wildlife, game, nongame, birds, and mammals. Some elements of this program have existed since 1947, but in its present form it has been available for ten years. Currently the program has 1300 cooperators on 3.4 million private acres covered under cooperative agreements. Funding for the program comes from federal and state funds with a total of \$1.2 million/year. Direct Financial Payments, Legal/Statutory Mechanisms